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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,855	03/26/2002	Thomas Hainsworth	UDLIP067	6373

22434 7590 04/09/2003

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EXAMINER

RUDDOCK, ULA CORINNA

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 04/09/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/009,855

Applicant(s)

HAINSWORTH ET AL.

Examiner

Ula C Ruddock

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 3/26/2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1 and 3 are objected to because of the following informalities: there is a difference in spelling of the same word, e.g. in claim 1 it is spelled "polyamideimide", in claim 3, it is spelled "polyamide imide". Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fottinger et al. (US 5,279,878) in view of Poisson (US 4,433,493). Fottinger et al. disclose a flame barrier that is used as a component of a planar multi-layer structure (abstract). The flame barrier is made up of a nonwoven fabric that can therefore be provided with warpwise as well as weftwise reinforcing threads (col 2, ln 62-63). It should be noted that the Examiner is equating the reinforcing threads of Fottinger et al. to be the same as the woven fabric of the present invention. The reinforcing threads can be aramids and polyamideimide (col 3, ln 11-15). Fottinger et al. fail to disclose that the fire resistant textile material includes a woven mesh of low shrinkage fibers and that ratio of face to back yarns by number is in the range 6:1 to 12:1 and that the face yarns counts is in the range of 15 to 50 Nm, more specifically 20-41 Nm and that the reverse side yarns count is in the range of 25 to 150 Nm, more specifically 40 to 60 Nm.

Poisson disclose high temperature resistant fabrics that are fabricated from an open mesh fabric made of Kevlar, i.e. p-aramid fibers (col 2, ln 21 and col 2, ln 38-42). The preference is based upon the high-temperature resistance of these fibers. It should be noted that the open mesh of Poisson is equated to Applicant's woven mesh. Furthermore, with regard to claim 2, since Applicant's mesh fibers comprises para-aramid yarns, then it is the Examiner's position that the para-aramid yarns of Poisson also have a shrinkage of less than 6% at 400 °C, as required by the present invention. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used Poisson's para-aramid mesh in place of the nonwoven fabric of Fottinger et al., motivated by the desire to obtain a flame barrier with increased dimensional stability, tensile strength, and tear resistance.

With regard to claims 1 and 8-11, it should be noted that optimizing the ratio of face to back yarns and optimizing both the face yarns count and reverse side yarns count are result effective variables. For example, the greater the face yarns counts and reverse side yarns counts directly affects the durability of the fabric. Therefore, it would have been obvious to one having ordinary skill in the art to have used a fabric having a ratio of face to back yarns by number is in the range 6:1 to 12:1 and the face yarns count in the range of 15 to 50 Nm, more specifically 20-41 Nm and that reverse side yarns count is in the range of 25 to 150 Nm, more specifically 40 to 60 Nm, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have optimized these properties motivated by the desire to create a fabric having increased durability and strength.

Art Unit: 1771

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fottinger et al. (US 5,279,878) in view of Poisson (US 4,433,493), as applied to claim 1 above, and further in view of Smith, Jr. (US 4,865,906). Fottinger et al. and Poisson disclose the claimed invention except for the teaching that the woven fabric is a plain weave. Smith, Jr. disclose a flame retardant yarn blend that is plain woven. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the plain weave as taught by Smith, Jr. as the woven fabric of Fottinger et al. and Poisson, motivated by the desire to create a fabric having durability.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: DE 29611356 was cited as an X reference. A complete translation of the document has been ordered.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C Ruddock whose telephone number is 703-305-0066. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

UCR *UCR*
April 6, 2003

Ula Ruddock